



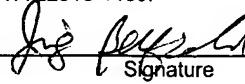
CASE PH 7496 NP

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Jing S. Belfield, Ph.D.

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November 11, 2003

Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

DEERBERG ET AL.

APPLICATION NO: 10/660,345

FILED: SEPTEMBER 11, 2003

FOR: ASYMMETRIC CATALYTIC HYDROGENATION PROCESS FOR  
PREPARATION OF CHIRAL CYCLIC B-AMINOESTERS

MAIL STOP: D.D.  
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INFORMATION DISCLOSURE STATEMENT

Sir:

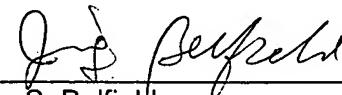
This paper is being filed within three months of the filing date of the application. Therefore, no fees are required. If a fee is deemed to be required, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 19-3880.

In accordance with 37 C.F.R. §1.56, applicants wish to call the Examiner's attention to the references cited on the attached form(s) PTO-1449.

Copies of these references are enclosed herewith.

The Examiner is requested to consider the foregoing information in relation to this application and indicate that each reference was considered by returning a copy of the initialed PTO 1449 form(s).

Respectfully submitted,

  
\_\_\_\_\_  
Jing S. Belfield  
Agent for Applicants  
Reg. No. 45,914

Bristol-Myers Squibb Company  
Patent Department  
P.O. Box 4000  
Princeton, NJ 08543-4000  
(609) 252-3791

Date: November 11, 2003

## INFORMATION DISCLOSURE CITATION

(use several sheets if necessary)

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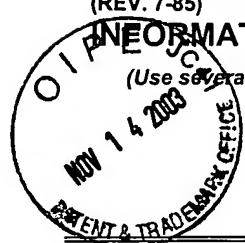
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

AI	Melillo, D. G.; Cvetovich, R. J.; Ryan, K. M.; Sletzinger, M., "An Enantioselective Approach to (+)-Thienamycin from Dimethyl 1,3-Acetonedicarboxylate and (+)- $\alpha$ -Methylbenzylamine", <i>J. Org. Chem.</i> 1986, 51, pp. 1498-1504.
AJ	Haviari, G; Célérier, J. P.; Lhommet, G.; Gardette, D.; Gramain, J. C.; "Asymmetric Synthesis with Chiral Hydrogenolysable Amines. Cyclic $\beta$ -Enamino Ester Reduction. A Diastereoselective Route to 2,3-Disubstituted Pyrrolidines", <i>Tetrahedron Lett.</i> , Vol. 33, pp. 4311-4312, 1992.
AK	Haviari, G; Célérier, J. P.; Petit, H.; Lhommet, G.; "Asymmetric Synthesis with Chiral Hydrogenolysable Amines. A Short Synthesis of (-) Isoretonecanol", <i>Tetrahedron Lett.</i> , Vol. 34., No. 10, pp. 1599-1600, 1993.
AL	Agami, C.; Kadouri-Puchot, C.; Le Guen, V.; Vaissermann, J., "Neuromediator Analogs: Synthesis of <i>cis</i> (2R,3S) and <i>trans</i> (2S,3S)-2,3-Piperidine Dicarboxylic Acids from (2S)-2-Phenylglycinol", <i>Tetrahedron Lett.</i> , Vol. 36, No. 10, pp. 1657-1660, 1995.
AM	Cimarelli, C.; Palmieri, G.; "Stereoselective Reduction of Anantiopure $\beta$ -Anamino Esters by Hydride: A Convenient Synthesis of Both Enantiopure $\beta$ -Amino Esters", <i>J. Org. Chem.</i> 1996, 61, pp. 5557-5563.
AN	Hayashi, Y.; Rhode, J.J.; Corey, E.J.; "A Novel Chiral Super-Lewis Acidic Catalyst for Anantioselective Synthesis", <i>J. Am. Chem. Soc.</i> 1996, 118, pp. 5502-5503.
AO	Agami, C.; Hamon, L.; Kadouri-Puchot, C.; Le Guen, V.; "Enantioselective Synthesis of Conformationally Restricted Analogs of NMDA: <i>cis</i> - and <i>trans</i> -Piperidine-2,3-dicarboxylic Acids and Methylated Derivatives", <i>J. Org. Chem.</i> 1996, 61, pp. 5736-5742.
AP	Segat, F.; Lingibé, O.; Graffe, B.; Sacquet, M.C.; Lhommet, G.; "Asymmetric Synthesis with Chiral Hydrogenolysable Amines: A New Route to Enantiomerically Pure Amino Diols", <i>Heterocycles</i> , Vol. 45, No. 8, pp. 1451-1455.
AQ	Blot, J.; Bardou, A.; Bellec, C.; Fargeau-Bellassoued, M. C.; Célérier, J. P.; Lhommet, G.; Gardette, D.; Gramain, J. C.; "Chiral Cyclic $\beta$ -AMino Esters. Part II: Synthesis by Diastereoselective Reduction of Anamino Esters", <i>Tetrahedron Lett.</i> , Vol. 38, No. 49, pp. 8511-8514, 1997.
AR	Daley, V.; d'Angelo, J.; Cave, C.; Mahuteau.J.; Chiaroni, A.; Riche, C.; "A Novel Asymmetric Synthesis of 2,5-Dialkylpyrrolidines", <i>Tetrahedron Letter</i> , Vol. 40, pp. 1657-1660, 1999.
AS	David, O et al., "Enamino Ester Reduction: A Short Enantioselective Route to Pyrrolizidine and Indolizidine Alkaloids. Synthesis of (+)-Laburnine, (+)-Tashiromine, and (-)-Isoretonecanol", <i>J. Org. Chem.</i> 1999, 64, 3122-3131.
AT	Zhong, H. M.; Cohen, J. H.; Abdel-Magid, A. F.; Kenney, B. D.; Maryanoff, C. A.; Shah, R. D.; Villani, F. J., Jr.; Zhang, F.; Zhang, X.; "An efficient stereoselective synthesis of methyl (S)-3-amino-3-(3-pyridyl)propanoate", <i>Tetrahedron Lett.</i> 1999, 40, 7721-7725.
AU	Mechelke, M. F.; Meyers, A. I.; "An efficient, asymmetric synthesis of (+)-euphoccoccine", <i>Tetrahedron Lett.</i> 2000, 41, 4339-4342.
AV	David, O.; Bellec, C.; Fargeau-Bellassoued; Lhommet, G.; "Diastereoselective reduction of chiral enaminolactones: A short and convenient route to anantiopure(+)-tashiromine", <i>Heterocycles</i> , Vol. 55, No. 9, 1689-1701, 2001.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial of reference considered, whether or not citation is in conformance with MPEP 609: Draw a line through citation if not in conformance and not considered. Include a copy of this form with the next communication to applicant.



## ~~INFORMATION DISCLOSURE CITATION~~

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## U.S. PATENT DOCUMENTS

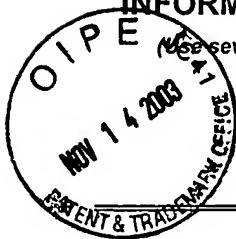
## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	OFFICE	CLASS	SUBCLASS	TRANSLATION YES	NO
/	AA	EP 062 840	3/31/82	EP			<input type="checkbox"/>	<input type="checkbox"/>
/	AB	EP 250 179	6/12/87	EP			<input type="checkbox"/>	<input type="checkbox"/>
/	AC	WO 00/43383	7/27/00	PCT			<input type="checkbox"/>	<input type="checkbox"/>
/	AD	WO 01/07433	2/1/01	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	AE	WO 01/70673	9/27/01	PCT			<input type="checkbox"/>	<input type="checkbox"/>

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)**

AF	Cimarelli, C.; Palmieri, G.; Bartoli, G.; "Diastereo and Enantioselective Entry to $\beta$ -Amino Esters by Hydride Reduction of Homochiral $\beta$ -Enamino Esters", <i>Tetrahedron: Asymmetry</i> , Vol. 5, No. 8, pp.1455-1458, 1994.
AG	Xu, D.; Prasad, K.; Repič, O.; Blacklock, T. J.; "A practical synthesis of an antiopure ethyl <i>cis</i> -2-amino-1-cyclohexanecarboxylate via asymmetric reductive amination methodology", <i>Tetrahedron: Asymmetry</i> , Vol. 8, No.9, pp. 1445-1451, 1997.
AH	Melillo, D. G.; Shinkai, I.; Liu, T., "A practical synthesis of ( $\pm$ )-Thienamycin", <i>Tetrahedron Lett.</i> , Vol. 21, 1980, pp. 2783-2786.

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**FORM PTO-1449  
(REV. 7-85)**

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Sheet 1 of 3

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Sheet 3 of 4

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent pages, Etc.)

	AY	Wang, G. T., et al; "Design, Synthesis, and Structural Analysis of Influenza Neuraminidase Inhibitors Containing Pyrrolidine Cores", J. Med. Chem. 2001, 44, 1192-1201
	AS	
	AT	

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**DATE CONSIDERED**